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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/680,608	10/04/2000	David C. Gelvin	21200-716	9581

53186 7590 08/08/2006

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EXAMINER

MIRZA, ADNAN M

ART UNIT PAPER NUMBER

2145

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/680,608

Applicant(s)

GELVIN ET AL.

Examiner

Adnan M. Mirza

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chau et al (U.S. 6,330,499) and Spaur et al (U.S. 5,732,074).

As per claims 1,42,49,56,57 Chou disclosed a method for remotely manipulating vehicle elements, comprising: coupling among a plurality of network elements including at least one vehicle internet work, at least one gateway of the vehicle, and the Internet (col. 1, lines 42-53); wherein the gateway node in the vehicle comprises at least one real-time interface processor (RTIP) and at least one application processor, the RTIP performing real-time operations and the application processor performing high-level processing functions; providing at least one of data processing, data storage, access control (col. 8, lines 34-51), protocol translation, security including service discovery and device authentication and network control using the gateway node; automatically providing secure interoperability among the plurality of network elements in response to node information including configuration and security information (col. 1, lines 53-64);

However Chou did not disclose in detail remotely manipulating at least one function of the vehicle elements.

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In the same field of endeavor Spaur disclosed the controller includes a processor for performing processing operations including running of executable running program code, including in the context of utilizing or incorporating data that the controller has access to, including in the context of utilizing or incorporating data that the controller 30 has access to. Preferably, the processor 90 is a single microprocessor that performs multiple tasks, in conjunction with a real time operating system (RTOS) 94. That is, the RTOS 94 manages a number of services associated with conducting one or more applications oriented tasks. Preferably, the RTOS 94 includes a kernel that is involved in performing real time multi-tasking including: task management, inter task communication, memory management, message management, timing, I/O management and error management. In the context of applications associated with the vehicle, the RTOS 94 works with applications software in a multi-task scheme to respond to requests for vehicle related information including data (col. 8, lines 7-23).

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have incorporated the controller includes a processor for performing processing operations including running of executable running program code, including in the context of utilizing or incorporating data that the controller has access to, including in the context of utilizing or incorporating data that the controller 30 has access to. Preferably, the processor 90 is a single microprocessor that performs multiple tasks, in conjunction with a real time operating system (RTOS) 94. That is, the RTOS 94 manages a number of services associated with conducting one or more applications oriented tasks. Preferably, the RTOS 94 includes a kernel that is involved in performing real time multi-tasking including: task management inter

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task communication, memory management, message management, timing, I/O management and error management. In the context of applications associated with the vehicle, the RTOS 94 works with applications software in a multi-task scheme to respond to requests for vehicle related information including data as taught by Spaur in the method of Chau the implementation of this communication system is to reduce burdensome and increase the processing capability which is portable and practical for the vehicle environment.

3. As per claims 2,43,50 Chau-Spaur disclosed further comprising hosting the at least one vehicle internet work on at least one of automobiles, trucks, aircraft, trains, motorcycles, and marine vessels (Spaur, col. 2, lines 28-33).
4. As per claims 3,44,51 Chau-Spaur disclosed further comprising coupling at least one gateway node of the vehicle to a remote user computer (Chau, col. 1, lines 53-64).
5. As per claims 4,45,52 Chau-Spaur disclosed wherein the at least one function includes vehicle control functions, security function, diagnostic functions, and network access functions (Chau, col. 4, lines 2-6).
6. As per claims 5,46,53 Chau-Spaur disclosed further comprising establishing communication among the at least one node of a plurality of host vehicles (Chau, col. 1. lines 42-53).

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7. As per claims 6,47,54 Chau-spaur disclosed further comprising supporting data transfer and manipulation among the plurality of network elements using at least one coupling among the at least one vehicle internet work and at least one external network (Spaur, col. 2, lines 29-42), wherein the data includes vehicle assembly data, service data, diagnostic data, maintenance data, maintenance history data, security data, vehicle position data, vehicle operations Profile data, operator profile data, fleet management data, fleet reliability analysis data, electronic mail, entertainment software, and targeted advertising data (Chau, col. 4, lines 38-42).

8. As per claims 7,38,41,48,55 Chau-Spaur disclosed further comprising: receiving a first type of data from the at least one vehicle internet work; performing diagnostic and prognostic analysis on the first type of data; transmitting a second type of data to the at least one vehicle internet work in response to the diagnostic and prognostic analysis (Chau, col. 1, lines 1-11).

9. As per claim 8,9 Chua-Spaur disclosed further comprising reprogramming at least one element of the at least one vehicle internet work using at least one Internet coupling (Chau, col. 7, lines 41-49).

10. As per claim 10 Chau-Spaur disclosed wherein the at least one vehicle internet work comprises at least one peripheral electronic device, wherein the at least one peripheral electronic device includes at least one device of climate control devices, actuator -devices, position location devices, Global Positioning System (GPS) devices (Chau, col. 3, lines 47-61), communication devices, cellular telephony devices, personal digital assistants (PDAs), processing devices,

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diagnostic devices, modems, pager devices, video devices, audio devices, multimedia devices, electronic game devices, sensor devices, switch devices, anti-theft devices, device subnet works, and wireless local area network (LAN) devices (Chau, col. 3, lines 16-32).

10. As per claim 11 Chau-Spaur disclosed further comprising supporting atomic transactions among the plurality of network elements (Spaur, col. 6, lines 54-61).

11. As per claim 12 Chau-Spaur disclosed further comprising manipulating the node information including configuration and security information to provide secure interoperability among the plurality of network elements and at least one peripheral electronic device (Chau, col. 3, lines 16-32).

12. As per claim 13 Chau-Spaur disclosed wherein the at least one vehicle internet work comprises at least one local area network that includes at least of an Original Equipment Manufacturer (OEM) bus (Chua, col. 6, lines 20-34), at least one Automotive Multimedia Interface Consortium (AMI-C) bus, at least one external network, at least one legacy automotive local development network, and at least one legacy automotive bus of Audio Control Protocol (ACP) buses and Standard Corporate Protocol (SCP) buses (Chau, col. 5, lines 33-48).

13. As per claim 14 Chua-Spaur disclosed further comprising: accessing the plurality of network elements using at least one local development network; and performing application upgrades, diagnostics, and programming, wherein the at least one local development network

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supports manipulation and transfer of entertainment software (Spaur, col. 2, lines 24-32), wherein the entertainment software comprises at least one of video, audio, movies, television shows, music, games, and simulations (Chou, col. 4, lines 8-24).

14. As per claim 15 Chau-Spaur disclosed wherein the at least one vehicle internet work comprises at least one interface port including at least one of Intelligent Data Bus (IDB-C) ports, MOST ports, Institute of Electrical and Electronics Engineers (IEEE) 1394 ports (Chau, col. 3, lines 15-31), On-Board Diagnostic-11 (OBD-11) ports, Standard Corporate Protocol (SCP) ports, Audio Control Protocol (ACP) ports, Blue tooth ports, Personal Communications Service (PCS) ports, Global System for Mobile Communications (GSM) ports, and local area network ports (Chau, col. 3, lines 31-61).

15. As per claim 16 Chau-Spaur disclosed wherein providing secure interoperability further includes distributing at least one function among the plurality of network elements in response to a coupling of peripheral electronic devices to at least one local area network of the at least one vehicle internet work (Chau, col. 6, lines 20-33).

16. As per claim 17 Chau-Spaur disclosed wherein the at least one vehicle internet work includes at least one function selected from a group consisting of data processing, data storage, access control, protocol translation, security including service discovery and device authentication, and network: control (Chau, col. 7, lines 5-23).

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17. As per claim 18 Chau-Spaur disclosed wherein the at least one vehicle internet work comprises a first processor performing real-time operations and a second processor performing high level processing functions (Chau, col. 5, lines 1-12).

18. As per claim 19 Chau-Spaur disclosed wherein the at least one vehicle internet work comprises at least one port node including at least one device selected from a group consisting of at least one processor, at least one memory cache, at least one wireless modem, at least one network protocol, at least one policy, and at least one wired local area network (LAN) (Chau, col. 5, lines 40-52).

19. As per claim 20 Chau-Spaur disclosed further comprising coupling the at least one vehicle internet work to at least one subnet work, wherein the at least one subnet work comprises at least one device selected from a group consisting of sensor devices, actuator devices, wired network devices, and wireless network devices (Chau, lines 15-32).

20. As per claim 21 Chau-Spaur disclosed wherein the at least one vehicle internet work generates at least one hierarchy of communication alternatives in response to a determined position of a host vehicle, wherein a selected communication device is used to communicate with the at least one other site (Spaur, col. 5, lines 5-19).

21. As per claim 22 Chau-Spaur disclosed further comprising controlling data processing using at least one processing hierarchy that controls at least one of data classifications, data

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transfers, data queuing, data combining, processing locations, and communications among the plurality of network elements (Spaur, col. 5, lines 43-66).

22. As per claims 23,58 Chau-Spaur disclosed further comprising distributing at least one function among the plurality of network elements, wherein the at least one function includes at least one of data acquisition, data processing, communication management, data routing, data security (Chau, col. 10, lines 1-11), programming, node operation, protocol translation, network management, and interfacing with at least one communication physical layer including cellular telephony, wire line telephone, satellite telephony, packet radio, microwave, optical (Chau, col. 3, lines 46-67).

23. As per claims 25,59 Chau-Spaur disclosed further comprising automatically organizing the plurality of network elements, wherein the automatic organizing comprises automatically controlling data transfer, processing, and storage among the plurality of network elements (Chau, col. 7, lines 5-23).

24. As per claims 26,39 Chau-Spaur disclosed further comprising supporting at least one level of synchronization among different subsets of the plurality of network elements, wherein a first level of synchronization is supported among a first subset of the plurality of network elements (Chau, col. 8, lines 43-52), wherein a second level of synchronization is supported among a second subset of the plurality of network elements (Spaur, col. 11, lines 5-15).

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25. As per claims 27,60 Chau-Spaur disclosed further comprising self-assembling the plurality of network elements, wherein search and acquisition modes of the plurality of network elements search for participating ones of the plurality of network elements, wherein a determination is made whether each of the participating ones of the plurality of network elements are permitted to join the vehicle (Spaur, col. 12, lines 1-17): internet work using a message hierarchy, wherein the plurality of network elements are surveyed at random intervals for new nodes and missing nodes (Spaur, col. 7, liens 14-23).

26. As per claim 28 Chau-Spaur disclosed wherein service discovery comprises synchronizing at least one node, authenticating the at least one node, determining at least one communication mode for the at least one node, informing the at least one node of resources available among the plurality of network elements (Chau, col. 9, lines 4-39).

27. As per claim 29 Chau-Spaur disclosed further comprising collecting data among the plurality of network elements, wherein at least one operation is performed on the data in response to parameters established by a user, the at least one operation being at least one of classification, routing, processing, storing, and fusing (Chau, col. 2, lines 53-64).

28. As per claim 30 Chau-Spaur disclosed wherein routing comprises selecting at least one data type for routing, determining at least one communication type and at least one communication coupling for routing, selecting at least one of the plurality of network elements to which to route the selected data, selecting at least one route to the selected at least one of the

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plurality of network elements (Chau, col. 4, lines 44-61) and routing the selected at least one data type to the selected at least one of the plurality of network elements (Spaur, col. 14, lines 35-38).

29. As per claim 31 Chau-Spau disclosed wherein processing comprises selecting at least one data type for processing, selecting at least one processing type, selecting at least one of the plurality of network elements to perform the selected at least one processing type, and transferring the selected at least one data type to the selected at least one of the plurality of network elements using at least one route (Chau, col. 4, lines 44-61).

30. As per claims 32,40 Chau-Spaur disclosed wherein storing comprises selecting at least one data type for storage, selecting at least one storage type, selecting at least one of the plurality of network elements to perform the selected at least one storage type, and transferring the selected at least one data type to the selected at least one of the plurality of network elements using at least one route through the plurality of network elements (Chau, col. 7, lines 5-23).

31. As per claim 33 Chau-Spaur disclosed wherein fusing comprises a first node transmitting at least one query request to at least one other node, wherein the first node collects data from the at least one other node in response to the at least one query request, and processes the collected data (Chau, col. 8, lines 43-52).

32. As per claim 34 Chau-Spaur disclosed wherein the plurality of network elements comprise a plurality of application programming interfaces (APIs), wherein the APIs include

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APIs for application support, database services, routing, security, network management, and deployment (Chau, col. 7, lines 3-14).

33. As per claim 35 Chau-Spaur disclosed wherein the plurality of APIs are layered, wherein the plurality of APIs enable distributed resource management by providing network resource information among the plurality of network elements, wherein information transfer among the plurality of network elements is controlled using a synchronism hierarchy established in response to the network resource information (Chau, col. 4, lines 1-14).

34. As per claim 36 Chua-Spaur disclosed further comprising supporting at least one of wireless communications, wired communications, and hybrid wired and wireless communications (Chau, col. 3, lines 16-32).

35. As per claim 37 Chua-Spaur disclosed further comprising coupling the at least one vehicle internet work to at least one remote computer through the plurality of network elements, wherein the plurality of network elements further includes at least one of at least one station gateway, at least one server, at least one repeater, at least one interrogator, and at least one network, wherein the at least one network includes wired networks, wireless networks, and hybrid wired and wireless networks (Chau, col. 3, lines 32-46).

Response to Arguments

Applicant's arguments filed 06/07/2006 have been fully considered but they are not persuasive.

Responses to applicant's arguments are as follows.

36. Applicant argued that it is not clear how the remote centre operation relates to the gateway node in the vehicle.

As to applicant's argument one ordinary skill in the art at the time of the invention knows that gateway node functionality to transfer the information or route them that relate to remote service center to that works under the same umbrella.

37. Applicant argued that prior art did not disclose, "use of two or more processors in the gateway with one processor performing real time operations and the other processor performing high-level processing functions"

As to Applicant's arguments Chou disclosed, "The processor may also be coupled by additional interface means such as infrared, RF serial and parallel ports and the like, to communicate with external devices such as printer, fax, personal digital assistant (PDA). Note book computer, etc. optionally, the processor may be coupled to a location sensing device, such as GPS receiver to provide vehicle location information (col. 3, lines 49-58). Further, other computing devices such

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as a laptop or personal data assistant may be used to perform the function of processor and some or all of the additional hardware components and to provide the hardware platform for the client computer device (col. 3, lines 63-67).

38. Applicant argued that prior art did not disclose wherein the gateway node comprises at least one real-time interface processor (RTIP) and at least one application processor, the RTIP performing real-time operations and the application processor performing high-level processing functions.

As to above argument Chou disclosed the diagnostic server places the request on a job queue for the call center to process and simultaneously initiates the diagnostic engine analysis. The diagnostic analysis may consist of comparing the diagnostic data with a standard data set containing a list of known faults and recommend actions or may include a more complex fault classification analysis using techniques such as neural network, classification trees, expert systems, case-based reasoning, and pattern recognition (col. 8, lines 34-44).

39. Applicant argued that prior art did not disclose data processing, data storage, access control, protocol translation, security including service discovery and device authentication, and network control using the gateway node.

As to applicants argument Chou disclosed the in-vehicle hardware includes at least one persistent storage device such a hard disk, CD-ROM, flash memory, and the like coupled to the processor.

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The processor may also be coupled by additional interface means such as infrared, RF, serial and parallel ports and the like, to communicate with external devices such as printer, printer fax, personal digital assistant (PDA), notebook, computer, etc (col. 3, lines 47-56).

40. Applicant argued that prior art did not disclose, “remotely manipulating at least one function of the vehicle elements and controlling remote access to the vehicle Internet work using the gateway node in response to intermittent external communications”.

As to applicants argument Spaur disclosed “the controller includes a processor for performing processing operations including running of executable running program code, including in the context of utilizing or incorporating data that the controller has access to, including in the context of utilizing or incorporating data that the controller 30 has access to. Preferably, the processor 90 is a single microprocessor that performs multiple tasks, in conjunction with a real time operating system (RTOS) 94. That is, the RTOS 94 manages a number of services associated with conducting one or more applications oriented tasks. Preferably, the RTOS 94 includes a kernel that is involved in performing real time multi-tasking including: task management, inter task communication, memory management, message management, timing, I/O management and error management. In the context of applications associated with the vehicle, the RTOS 94 works with applications software in a multi-task scheme to respond to requests for vehicle related information including data (col. 8, lines 7-23). One ordinary skill in the art at the time of the invention interpreted the application associated with the vehicle, the RTOS 94 works with applications software in a multi-task scheme to respond to requests to

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vehicle related information including data interpreted as remotely manipulating at least one function of the vehicle elements and controlling remote access to the vehicle Internet work using the gateway node in response to intermittent external communications where every vehicle is considered remote object and RTOS provide the application processing in the real time.

41. Applicant argued that prior art did not disclose, “remote manipulating at least one function of the vehicle elements and controlling remote access to the vehicle internet work using the gateway node in response to intermittent external communications”.

As to applicant’s argument Chou disclosed, “The in-vehicle hardware includes at least one persistent storage device such as hard disk, CD-ROM, flash memory, and like coupled to the processor. The processor may also be coupled by additional interface means such as infrared, RF serial and parallel ports and the like, to communicate with external devices such as printer, fax, personal digital assistant (PDA), notebook computer, etc. Optionally, the processor may be coupled to a location sensing device such as GOS receiver 317 (FIG. 1) to provide vehicle location information. The system may or may not assume the availability of the automatic vehicle position information. Location-related scenarios, such as emergency help dispatch may use automatic vehicle positioning or may depend on the driver to provide position information (col. 3, lines 47-61)”.

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Conclusion

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Adnan Mirza whose telephone number is (571)-272-3885.


42. The examiner can normally be reached on Monday to Friday during normal business hours. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on (571)-272-3933. The fax for this group is (703)-746-7239. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

43. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866)-217-9197 (toll-free).



Adnan Mirza

Examiner



JASON CARDONE
SUPERVISORY PATENT EXAMINER